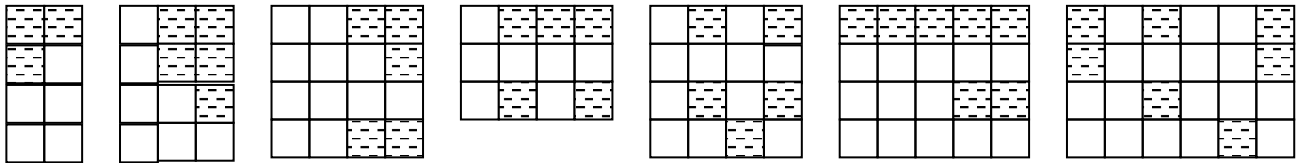


Fractions, Decimals and Percentages

1. Each shape has a number of equal parts. Find the fraction that is shaded.



2. Now find the fraction that is not shaded.

3. Draw diagrams like those in question 2 to show these fractions.

(a) $\frac{1}{2}$ (b) $\frac{1}{3}$ (c) $\frac{2}{3}$ (d) $\frac{1}{4}$ (e) $\frac{3}{4}$ (f) $\frac{2}{7}$ (g) $\frac{2}{5}$

4. Calculate: (a) $\frac{1}{2}$ of £80 (b) $\frac{1}{2}$ of £120 (c) $\frac{1}{2}$ of £60 (d) $\frac{1}{2}$ of 24 m

5. The bill in the café came to £6.62, and Jill and Amy split equally between them. How much did each pay?



6. Half the pupils in first year own a computer. 110 pupils own a computer. How many pupils are there in first year?

7. Calculate: (a) $\frac{1}{3}$ of 18km (b) $\frac{1}{7}$ of 21m (c) $\frac{1}{4}$ of 24mm (d) $\frac{1}{9}$ of 36cm
(e) $\frac{1}{10}$ of 20 litres (f) $\frac{1}{6}$ of 24km (g) $\frac{1}{7}$ of 28m (h) $\frac{1}{8}$ of 32mm



8. In the special Halloween Bumper Pack there are 72 lollipops:

$\frac{1}{6}$ are orange, $\frac{1}{4}$ are lemon, $\frac{1}{3}$ are raspberry and the rest are blackcurrant.

How many lollipops are: (a) orange (b) lemon (c) raspberry (d) blackcurrant?

9. Copy and complete: (a) $\frac{1}{2} = \frac{\quad}{4}$ (b) $\frac{1}{7} = \frac{\quad}{21}$ (c) $\frac{1}{5} = \frac{3}{\quad}$ (d) $\frac{1}{8} = \frac{5}{\quad}$ (e) $\frac{2}{3} = \frac{\quad}{12}$

(f) $\frac{3}{4} = \frac{\quad}{12}$ (g) $\frac{5}{6} = \frac{\quad}{30}$ (h) $\frac{3}{8} = \frac{\quad}{72}$ (i) $\frac{4}{5} = \frac{16}{\quad}$ (j) $\frac{2}{7} = \frac{12}{\quad}$

10. Simplify these fractions: (a) $\frac{4}{8}$ (b) $\frac{4}{6}$ (c) $\frac{3}{18}$ (d) $\frac{5}{20}$ (e) $\frac{15}{50}$ (f) $\frac{21}{28}$
 (g) $\frac{22}{25}$ (h) $\frac{12}{24}$ (i) $\frac{4}{52}$ (j) $\frac{5}{100}$ (k) $\frac{13}{26}$ (l) $\frac{72}{81}$

11. Convert these into **improper** fractions:

(a) $1\frac{1}{2}$ (b) $3\frac{3}{5}$ (c) $4\frac{3}{8}$ (d) $2\frac{1}{5}$ (e) $11\frac{1}{4}$ (f) $15\frac{2}{3}$

12. There are 240 pupils in first year. Calculate the number in each category.

(a) $\frac{1}{2}$ are boys (b) $\frac{1}{5}$ have brown eyes (c) $\frac{1}{4}$ travel by bus (d) $\frac{1}{8}$ have a computer.

13. Calculate: (a) $\frac{3}{5}$ of 25 (b) $\frac{2}{7}$ of 42 (c) $\frac{3}{10}$ of 270 (d) $\frac{3}{8}$ of £24 (e) $\frac{5}{9}$ of 54g

14. (a) A bottle holds $\frac{9}{10}$ of a litre. How many litres are in 7 bottles?

(b) A packet weighs $\frac{3}{5}$ of a kilogram. What is the weight of 6 packets?

(c) Peter walks for $\frac{2}{3}$ of an hour each day. How long does he walk in one week?

15. Find (a) $\frac{8}{17} + \frac{2}{17}$ (b) $\frac{4}{6} + \frac{1}{6}$ (c) $\frac{7}{10} - \frac{5}{10}$

(d) $\frac{1}{15} + \frac{2}{15}$ (e) $\frac{6}{19} - \frac{2}{19}$ (f) $\frac{8}{21} + \frac{2}{21}$

16. Find (a) $\frac{5}{16} + \frac{1}{8}$ (b) $\frac{4}{6} + \frac{1}{12}$ (c) $\frac{7}{10} - \frac{5}{30}$ (d) $\frac{1}{30} + \frac{2}{15}$ (e) $\frac{17}{18} - \frac{2}{3}$ (f) $\frac{8}{21} + \frac{2}{7}$

17. (a) $\frac{1}{4} \times \frac{1}{7}$ (b) $\frac{5}{7} \times \frac{1}{9}$ (c) $\frac{2}{3} \times \frac{1}{4}$ (d) $\frac{5}{7} \times \frac{1}{10}$ (e) $\frac{5}{7} \times \frac{1}{3}$ (f) $\frac{8}{9} \times \frac{4}{9}$ (g) $\frac{5}{7} \times \frac{2}{3}$

18. Find (a) $50 \div \frac{1}{4}$ (b) $70 \div \frac{1}{3}$ (c) $50 \div \frac{3}{4}$ (d) $18 \div \frac{6}{7}$ (e) $45 \div \frac{1}{4}$ (f) $65 \div \frac{1}{3}$

19. Find (a) $\frac{3}{4} \div \frac{1}{4}$ (b) $\frac{1}{6} \div \frac{1}{3}$ (c) $\frac{1}{8} \div \frac{3}{4}$ (d) $\frac{1}{12} \div \frac{6}{7}$ (e) $\frac{1}{12} \div \frac{1}{4}$ (f) $\frac{1}{12} \div \frac{1}{3}$